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Exploring the interrelations of obsessions, compulsions, and health: the mediating role of psychotic symptoms in individuals with obsessive-compulsive disorder

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ABSTRACT

Background: Despite the high comorbidity between obsessive-compulsive and psychotic symptoms, little is known about its impact on the health of individuals with obsessive-compulsive disorder (OCD). This study aimed to 1) explore the prevalence of psychotic symptoms in individuals with OCD, and 2) examine the mediating role of psychotic symptoms in the relationship between obsessive-compulsive symptoms and overall health.
Methods: This study included 102 participants undergoing treatment for OCD ($M_{age} = 42.33$, $SD = 14.40$, 52.9 % female). Structural equation modeling was employed to assess whether psychotic symptoms mediated the relationship between obsessive-compulsive symptoms and health outcomes.
Results: Among participants with OCD (from mild to severe), 53.9 % exhibited positive psychotic symptoms, 74.7 % presented negative psychotic symptoms, and 83.5 % showed depressive psychotic symptoms. A significant correlation was found between OCD symptoms and psychotic symptoms (r ranging from .338 to .512). Structural equation modeling indicated that psychotic symptoms fully mediated the relationship between compulsions and health.
Conclusions: Understanding the intricate relationship between OCD and psychotic symptoms remains a critical challenge in mental health research and clinical practice. Enhanced insights into this connection could facilitate more precise diagnoses and allow for more personalized treatments.

1. Introduction

The high co-occurrence of obsessive-compulsive symptoms and psychotic symptoms has garnered significant interest in recent years. Both theoretical and clinical research have highlighted this overlap in epidemiological, phenomenological (e.g., the similarity between obsessions and delusions), and neurobiological terms (e.g., neurotransmitters, brain areas) (Frías-Ibáñez et al., 2014; Hadi et al., 2012; Pardossi et al., 2024; Szalisznyó et al., 2019).

Epidemiological studies have attempted to quantify this overlap. Psychotic symptoms can occur in individuals diagnosed with obsessive-compulsive disorder (OCD), although prevalence rates vary widely. A recent review by Attademo and Bernardini (2021) reported that the prevalence of psychotic disorders among individuals with OCD ranges from 4 % to 26 % (Attademo and Bernardini, 2021). Similarly, a recent meta-analysis reveals that between 1.7 % and 14 % of individuals with OCD also meet criteria for a psychotic disorder (Rowe et al., 2022), and some longitudinal studies suggest that individuals with OCD have up to 12 times higher probability of receiving a diagnosis of schizophrenia compared to the general population (Cederlöf et al., 2015). Additionally, obsessive-compulsive symptoms may precede the onset of psychotic symptoms and contribute to more severe clinical outcomes (Cavaco et al., 2023; Faragian et al., 2012; Schirmbeck et al., 2018; Sterk et al., 2011; Van Dael et al., 2011).

Importantly, individuals with OCD who also exhibit psychotic symptoms (without necessarily meeting diagnostic criteria for psychosis) tend to present with a distinct and more severe clinical profile compared with individuals with OCD who do not exhibit psychotic symptoms. This includes higher rates of legal (Bener et al., 2018) and illegal substance use (Rowe et al., 2022), increased comorbidity of

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mental health disorders (e.g., depression, anxiety) (Bener et al., 2018; Fontenelle et al., 2012; Hagen et al., 2013; Tezenas du Montcel et al., 2019), greater suicidal behavior (both ideation and attempts) (Hagen et al., 2013; Sharma and Reddy, 2019; Tezenas du Montcel et al., 2019), and more pronounced cognitive deficits (e.g., executive function, memory) (Dijkstra et al., 2021; Wehbé et al., 2019; Zink, 2014). This comorbidity (i.e., OCD and psychosis) has also been associated with worse functioning (Bener et al., 2018; Cunill et al., 2013; Dijkstra et al., 2021; Okamura et al., 2022; Sharma and Reddy, 2019), longer clinical course (Bener et al., 2018), and poorer treatment response (Grover et al., 2019; Sharma and Reddy, 2019; Tezenas du Montcel et al., 2019) in comparison with individuals with OCD but without psychotic symptoms.

However, despite evidence of worse outcomes in individuals with both conditions, the literature on this topic remains inconsistent. Some studies do not find increased prevalence of psychotic symptoms among individuals with OCD compared to other psychopathological diagnoses (De Haan et al., 2009; Solem et al., 2015; Wang et al., 2021). This variability may be explained by factors such as historical diagnostic criteria. For example, the DSM-III excluded comorbid schizophrenia when diagnosing OCD (American Psychiatric Association, 1987), or by clinical and methodological aspects. For instance, in cases where both symptom types coexist, the more prominent symptomatology (e.g., delusions or hallucinations) may mask the detection of obsessive-compulsive symptoms, especially during early clinical assessments. Additionally, several sociodemographic characteristics (e.g., country) or methodological issues (e.g., questionnaires) could explain this heterogeneity. Finally, the presence and intensity of psychotic symptoms in OCD may be influenced by factors such as OCD severity (Tonna et al., 2024), levels of metacognition (Hagen et al., 2017), or level of insight (Korkmaz et al., 2023), among other factors.

In addition to the diagnostic overlap, there is still limited clarity regarding the specific associations between dimensions of OCD (obsessions and compulsions) and psychotic symptoms. Some studies have found significant relationships between obsessions and compulsions with psychotic symptoms (Kayahan et al., 2005; Korkmaz et al., 2023; Shan et al., 2020; Soyata et al., 2018). Others, however, suggest more specific patterns. For example, certain findings indicate significant correlations only between obsessive-compulsive symptoms and positive psychotic symptoms (Tiryaki and Özkorumak, 2010), while other studies report associations exclusively between compulsions and psychotic symptoms (Borrelli et al., 2023; Singh et al., 2019), or only between obsessions and psychotic symptoms (Doyle et al., 2014). These inconsistencies may be partially explained by the fact that many studies do not differentiate between types of psychotic symptoms or OCD dimensions.

Despite the relevance of this overlap, to our knowledge, there is a lack of research exploring its relationship with overall health, particularly from a dimensional perspective. Understanding how specific obsessive-compulsive symptom dimensions relate to different psychotic symptoms and how these in turn influence physical and emotional health is essential for improving clinical assessment and treatment planning.

Based on the aforementioned background, this study aims to: 1) explore the presence of psychotic symptoms in a clinical population of individuals with OCD; 2) examine the correlation between obsessive-compulsive symptoms and psychotic symptoms; and 3) analyze the mediating role of psychotic symptoms in the relationship between obsessive-compulsive symptoms and health outcomes.

2. Methods

2.1. Participants and procedure

The study sample consisted of 102 participants ($M_{age} = 42.33$, $SD = 14.40$, aged between 18 and 68 years). The majority of the participants were women (52.9 %, $n = 54$), and the remaining 47.1 % ($n = 48$) were men. All the participants were undergoing treatment for OCD in IMQ-AMSA hospital (Bilbao, Spain), a specialized mental health center. The hospital is structured into different diagnostic-specific units and delivers treatment through a combination of individual and group therapy, as well as multifamily sessions.

The study was conducted between April 2018 and May 2022. Inclusion criteria included being over 18 years old, presenting a diagnosis of OCD according to DSM-5-TR criteria (American Psychiatric Association, 2023), and currently receiving treatment for OCD. Diagnoses were made by the clinical psychiatrists at the hospital.

A total of 55 participants (53.9 %) were diagnosed with a psychiatric disorder comorbid with OCD. Specifically, the comorbid disorders, according to ICD-10 codes, were as follows: 36.3 % ($n = 37$) of participants had an additional personality disorder, 25.5 % ($n = 26$) an adjustment disorder, 16.7 % ($n = 17$) an anxiety disorder, 10.8 % ($n = 11$) an affective disorder, and 6.9 % ($n = 7$) a substance-related disorder. Notably, only one participant (1 %) was diagnosed with a comorbid psychotic disorder (i.e., paranoid schizophrenia). Other less frequent conditions included eating disorders ($n = 2$), gambling disorder ($n = 1$), and ADHD ($n = 1$).

All participants provided written informed consent before completing the questionnaires and were assured of confidentiality and anonymity regarding their responses. They were informed that participation was entirely voluntary, with no compensation provided.

2.2. Instruments

The Yale-Brown Obsessive Compulsive Scale [YBOCS; Goodman et al. (1989) and its Spanish validation (Sal y Rosas et al., 2002)] is an instrument designed to assess the severity of obsessive-compulsive symptoms in individuals with OCD. It consists of 10 items, five assessing obsessions and five assessing compulsions. Each item is rated on a 5-point Likert-type scale (ranging from 0, 'absence of symptoms,' to 4, 'extremely severe symptoms'). Hence, the total score ranges from 0 to 40 points. This total score is categorized into four severity levels: subclinical OCD (0–13 points), mild OCD (14–21 points), moderate OCD (22–29 points), and severe OCD (30–40 points) (Cervin et al., 2022). In our study, Cronbach's alpha was excellent for both the obsessions ($\alpha = .877$) and compulsions subscales ($\alpha = .906$).

Psychotic symptoms were assessed using the Community Assessment of Psychic Experiences-42 (CAPE-42; Stefanis et al., 2002), validated to Spanish by Ros-Morente et al. (2011). The CAPE uses two 4-point Likert scales: one for the frequency of symptoms (from 'never' to 'nearly always') and one for the distress caused by symptoms (ranging from 'not distressed' to 'very distressed'). Further, the scale consists of 42 items evaluating the positive (20 items), negative (14 items), and depressive (8 items) symptoms of psychosis. In this study, reliability was high for both the positive ($\alpha = .881$), negative ($\alpha = .878$), and depressive symptoms subscale ($\alpha = .858$).

Although there are several methods to obtain the score for each subscale (Jaya et al., 2021), this study used the mean of item scores related to the frequency of positive and negative symptoms, resulting in scores ranging from 1 to 4 points. Following prior recommendations (Jaya et al., 2021), we dichotomized the frequency of positive symptoms at a cut-off of 1.44, the frequency of negative symptoms at 1.77, and the frequency of depressive symptoms at 1.80.

The Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) (Ware and Sherbourne, 1992), validated to Spanish by Alonso et al. (1995), was used to assess the level of health-related quality of life. This questionnaire includes 36 items across eight subscales: physical functioning (10 items), physical role limitations (4 items), bodily pain (2 items), emotional role limitations (3 items), general health perceptions (5 items), energy/vitality (4 items), social functioning (2 items), and mental health (5 items). A detailed description of the correctness and scoring of the scale can be found on this webpage (https://www.phys

iotutors.com/es/questionnaires/sf-36-rand-36-mos/). In this study, internal consistency ranged between .694 in the emotional role limitations subscale and .920 in the physical functioning subscale.

2.3. Data analysis

The sample was characterized using descriptive statistics, including means and frequencies, to summarize the study variables. Categorical scores of OCD severity and presence or absence of psychotic symptoms were only used to examine the differences in psychotic symptoms (presence vs. absence) based on OCD severity categories (i.e., subclinical, mild, moderate, and severe) were analyzed using chi-square. Furthermore, bivariate correlations were calculated using continuous scores to examine the relationship between the study variables.

Structural equation modeling (SEM) was conducted to examine the mediating role of psychotic symptoms (positive, negative, and depressive symptoms) on the relationship between obsessive-compulsive symptoms and health. Model fit parameters were estimated using maximum likelihood estimation with a multipronged approach. A chi-square test assessed the alignment of the model-implied and sample covariance matrices, where a non-significant *p*-value suggests a good model fit. However, due to the chi-square test's sensitivity to large sample sizes (Meade et al., 2008), we also used several alternative fit indices: 1) the Tucker–Lewis index (TLI; Tucker and Lewis, 1973), with values > .90 indicating adequate fit, 2) the comparative fit index (CFI; Bentler, 1990), where values > .90 indicate good fit, and 3) the root mean square error of approximation (RMSEA), with values < .06 or < .08 suggesting adequate fit (Byrne, 2009; Hu and Bentler, 1999; Schermelleh-Engel et al., 2003). All analyses were performed using IBM SPSS (version 28) and AMOS (version 28), with a 95 % confidence level.

3. Results

3.1. Presence of psychotic symptoms based on obsessive-compulsive severity

The results indicate no statistically significant differences in the presence of both positive and negative psychotic symptoms based on OCD severity. Specifically, 49 individuals (53.85 %) with OCD symptoms (ranging from mild to severe) exhibited positive symptoms, compared to 30 individuals (32.97 %) with OCD symptoms who did not. Similarly, 68 individuals (74.73 %) with OCD symptoms displayed negative psychotic symptoms, while 12 individuals (13.19 %) with OCD symptoms did not present such symptoms. Finally, there was a significant association between OCD severity categories and depressive psychotic symptoms; specifically, 76 participants (83.52 %) with OCD symptoms showed depressive psychotic symptoms compared to 7 individuals (7.69 %) with OCD that did not show depressive psychotic symptoms (see Table 1).

3.2. Relationship between obsessive-compulsive symptoms, psychotic symptoms, and health

Bivariate correlations (see Table 2) revealed that obsessions were moderately correlated with positive psychotic symptoms (r = .338), negative psychotic symptoms (r = .412), and depressive psychotic symptoms (r = .512). Concerning compulsions, they also showed moderate correlations with both positive (r = .414), negative (r = .430), and depressive (r = .499) psychotic symptoms. Additionally, it is worth noting the weak association between obsessions and the several health subscales, with significance observed only in relation to mental health (r = −.271). In contrast, compulsions showed a higher relationship with health subscales, particularly with physical role limitations, energy/vitality, and mental health (r ranging from −.275 to −.300).

Also, it is important to note the correlations between psychotic symptoms and health. Positive psychotic symptoms were negatively associated with physical functioning, bodily pain, general health perception, energy or vitality, and mental health (r ranging from −.311 to −.386). Similarly, negative psychotic symptoms were correlated with all health subscales except for social functioning and emotional role limitations (r ranging from −.233 to −.430). Finally, symptoms from the depressive dimension of psychosis were modestly negatively associated with all dimensions of health (r ranging from −.240 to −.510).

3.3. Mediating effect of psychotic symptoms on the relationship between obsessive-compulsive symptoms and health

Structural equation models demonstrated an adequate fit to the data, both in positive psychotic symptoms [χ^2 (36) = 76.489, p = .001, χ^2/df = 1.866; TLI = .857; CFI = .911; RMSEA = .072 (90 %CI: .030, .107), R^2 = .208], negative psychotic symptoms [χ^2 (36) = 73.049, p = .002, χ^2/df = 1.782; TLI = .872; CFI = .921; RMSEA = .065 (90 %CI: .015, .102), R^2 = .262], and depressive psychotic symptoms [χ^2 (36) = 74.441, p = .001, χ^2/df = 1.816; TLI = .875; CFI = .922; RMSEA = .073 (90 %CI: .031, .108), R^2 = .397].

Results indicated that psychotic symptoms (positive, negative, and depressive psychotic symptoms) significantly mediated the relationship between obsessive-compulsive symptoms and health. The three mediating models, with positive, negative, and depressive psychotic symptoms, are displayed in Figs. 1–3, respectively. Specifically, while the direct relationship between compulsions and health was not significant (β between −.164 and −.217, $p \geq .163$) this relationship was fully mediated by positive symptoms (Indirect effect: β = −.138, Total effect: β = −.343), negative symptoms (Indirect effect: β = −.130, Total effect: β = −.347) and depressive psychotic symptoms (Indirect effect: β = −.184, Total effect: β = −.348).

Conversely, the relationships between obsessions and psychotic symptoms were not significant (all p-values ≥.237), and hence, psychotic symptoms did not mediate the association between obsessions and health.

4. Discussion

This study confirms and expands on previous findings regarding the presence of psychotic symptoms among a clinical population with OCD. Three key results emerged from our study: 1) the high prevalence of psychotic symptoms in individuals with OCD; 2) the moderate relationship between obsessive-compulsive symptoms, psychotic symptoms, and health; and 3) psychotic symptoms fully mediated the relationship between compulsions and health.

Table 1
Differences in psychotic symptoms based on obsessive-compulsive severity.

	Subclinical (n = 10)	Mild (n = 24)	Moderate (n = 45)	Severe (n = 22)	χ^2 (df)	p-value	Cramer's V
Presence of positive symptoms	4 (40.0 %)	8 (33.33 %)	25 (55.56 %)	16 (72.73 %)	6.737 (3)	.081	.275
Absence of positive symptoms	6 (60.0 %)	11 (45.83 %)	14 (31.11 %)	5 (22.73 %)			
Presence of negative symptoms	6 (60.0 %)	15 (62.50 %)	34 (75.56 %)	19 (86.36 %)	6.537 (3)	.088	.270
Absence of negative symptoms	4 (40.0 %)	5 (20.83 %)	6 (13.33 %)	1 (4.55 %)			
Presence of depressive symptoms	5 (50.0 %)	17 (70.83 %)	37 (82.22 %)	22 (100 %)	17.249 (3)	.001	.431
Absence of depressive symptoms	5 (50.0 %)	4 (16.67 %)	3 (6.67 %)	0 (0 %)			

Table 2
Bivariate correlations between obsessive-compulsive symptoms, psychotic symptoms and health.

	1	2	3	4	5	6	7	8	9	10	11	12
Obsessive-compulsive symptoms												
1. Obsessions	–											
2. Compulsions	.744***	–										
Psychotic symptoms												
3. Positive symptoms	.338***	.414***	–									
4. Negative symptoms	.412***	.430***	.637***	–								
5. Depressive symptoms	.512***	.499***	.651***	.795***	–							
Health												
6. Physical functioning	−.123	−.139	−.339**	−.430***	−.426***	–						
7. Physical role limitations	−.150	−.300**	−.149	−.233*	−.240*	.242*	–					
8. Bodily pain	−.111	−.155	−.311**	−.307**	−.363**	.498***	.382***	–				
9. General health perception	−.099	−.140	−.386***	−.357***	−.412***	.328**	.475***	.407***	–			
10. Energy/Vitality	−.191	−.275*	−.315**	−.390***	−.510***	.586***	.400***	.640***	.581***	–		
11. Social functioning	−.267	−.342	−.327	−.374	−.464***	.456***	.381***	.408***	.323**	.646***	–	
12. Emotional role limitations	.021	−.114	−.120	−.170	−.269*	.152	.369***	.304**	.245*	.392***	.391***	–
13. Mental health	−.271*	−.298**	−.348**	−.395***	−.580***	.406***	.295**	.490***	.455***	.750***	.740***	.437***

Note. *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

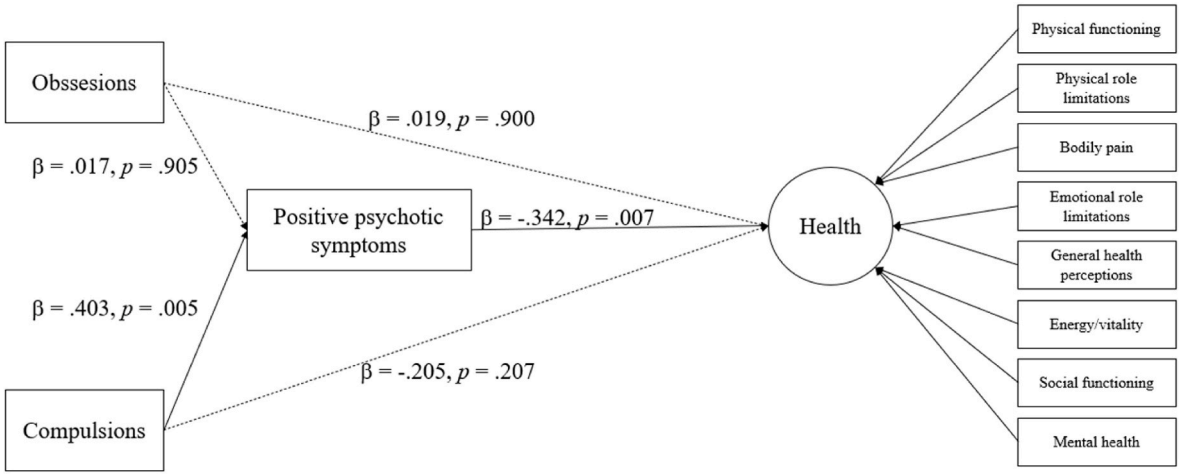

Fig. 1. Mediating role of positive psychotic symptoms in the relationship between obsession and compulsions and health
Note. Solid lines indicate significant effects at a 95 % confidence interval. Dashed line indicates non-significant effects at a 95 % confidence interval.

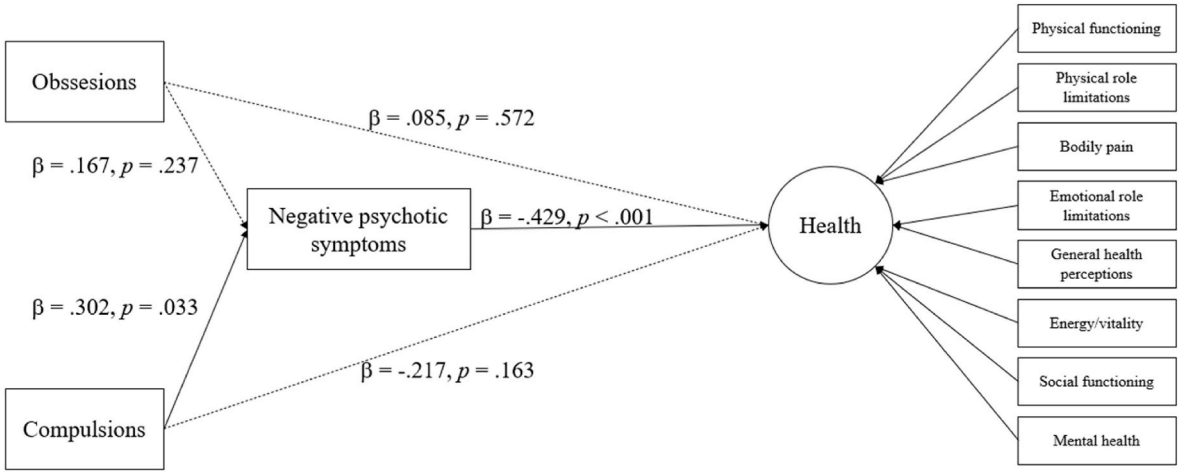

Fig. 2. Mediating role of negative psychotic symptoms in the relationship between obsession and compulsions and health
Note. Solid lines indicate significant effects at a 95 % confidence interval. Dashed line indicates non-significant effects at a 95 % confidence interval.

The elevated prevalence of psychotic symptoms in individuals with OCD has been largely documented in previous studies (Attademo and Bernardini, 2021; Cederlöf et al., 2015; Rasmussen et al., 2020; Rowe et al., 2022). However, our results show a strikingly higher prevalence (61 %–84 %) compared to prior meta-analyses (Rowe et al., 2022), where the presence of psychotic symptoms in individuals with OCD

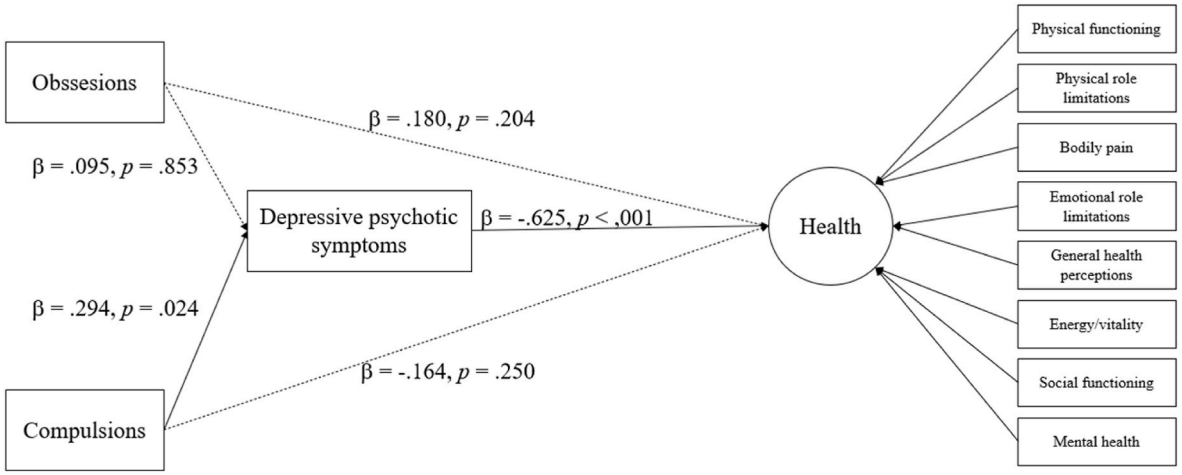

Fig. 3. Mediating role of depressive psychotic symptoms in the relationship between obsession and compulsions and health
Note. Solid lines indicate significant effects at a 95 % confidence interval. Dashed line indicates non-significant effects at a 95 % confidence interval.

ranged from 1 % to 14 %. This discrepancy raises the possibility that a substantial proportion of the psychotic-like experiences captured dimensionally in our study may represent secondary phenomena associated with OCD itself, comorbid mood disorders, or adverse effects of psychotropic medication, rather than reflecting primary negative symptomatology intrinsic to schizophrenia (Kirkpatrick, 2014; Strauss et al., 1974). Another key factor contributing to this discrepancy lies in the methodological differences between studies. Prior investigations have primarily relied on diagnostic interviews (e.g., Structured Clinical Interview for DSM or Clinical Interview Schedule), which are designed to detect clinically significant symptoms that meet diagnostic thresholds. In contrast, our study used the CAPE-42, a dimensional self-report instrument that captures psychotic-like experiences across a continuum, including subclinical manifestations that may not reach diagnostic criteria. Notably, studies that focus on psychotic symptoms regardless of diagnostic status tend to report higher prevalence rates (Cunill et al., 2023; Rasmussen et al., 2020), supporting the idea that psychotic experiences may be more common when assessed dimensionally. To our knowledge, only the study by Korkmaz et al. (2023) has reported the prevalence of positive psychotic symptoms in OCD patients using the CAPE, finding a rate of 89.2 %. However, that study defined positive symptom presence as responding "often" or "almost constantly" to at least one item, a criterion that may further inflate prevalence estimates.

Moreover, it is noteworthy that this study focused on a clinical population receiving outpatient treatment for OCD, which likely reflects higher severity of symptoms and greater comorbidity. Other studies in this field have been carried out with the general population (Adam et al., 2012; Rejek and Misiak, 2023; Solem et al., 2015) or with a sample of individuals in different treatment settings (Cunill et al., 2023; Mawn et al., 2020; Swets et al., 2014), which makes it difficult to compare and generalize the results. Finally, it should be recalled that, according to the DSM-III (American Psychiatric Association, 1987), schizophrenia was an exclusion criterion for the diagnosis of OCD. Consequently, the studies carried out at that time could show a very low prevalence of comorbidity (Mawn et al., 2020).

Another factor contributing to the heterogeneity in prevalence rates could be the diagnostic challenge of distinguishing obsessions from delusions (Bürgy, 2007; Oulis et al., 2013), particularly in cases of poor or absent insight (Okamura et al., 2022). Reducing insight to a dichotomy of full awareness versus complete unawareness is overly simplistic (Attademo et al., 2012). Research indicates that certain symptoms may exhibit a hybrid nature; they can be intrusive and repetitive, much like obsessions, but may also retain delusional content, complicating the differentiation between these two clinical entities (de Avila et al., 2019; Okamura et al., 2022; Ottoni et al., 2023; Oulis et al., 2013). These "obsessive delusions" can create a spectrum of insight deficits, making differential diagnosis particularly complex.

Findings indicate that both obsessions and compulsions are significantly correlated with positive, negative, and depressive psychotic symptoms. To our knowledge, little research has examined the relationship between obsessions and compulsions with psychotic symptoms separately. The majority of studies analyze the relationship between obsessive-compulsive symptoms collectively (see e.g., Kayahan et al., 2005; Schirmbeck et al., 2018; Shan et al., 2020; Solem et al., 2015) or psychotic symptoms in a grouped manner (see e.g., Borrelli et al., 2023; Doyle et al., 2014; Shan et al., 2020; Solem et al., 2015; Soyata et al., 2018; Tiryaki and Özkorumak, 2010). Furthermore, recent dimensional perspectives on psychosis (e.g., Loch, 2019; Tonna et al., 2019) support the view that affective, positive, negative-disorganization and other symptom dimensions commonly co-occur, particularly at early or subthreshold stages, highlighting their occurrence across diagnostic criteria and supporting a transdiagnostic, developmental perspective, which is congruent with our results.

The more pronounced relationship between compulsions and psychotic symptoms, although slight, may be due to the phenomenological similarity between compulsions and the disorganized behaviors characteristic of psychotic disorders (Hadi et al., 2012; Pardossi et al., 2024). For example, both compulsions and disorganized behaviors can involve repetitive, ritualized actions that may appear purposeless or illogical, and both can significantly disrupt daily functioning. In cases of severe OCD, compulsive behaviors may become so rigid and pervasive that they resemble disorganized patterns seen in psychosis, such as repetitive motor actions or behaviors driven by delusional beliefs. Furthermore, compulsions are aimed at reducing distress or anxiety through a process of negative reinforcement (Starcevic et al., 2011), so in psychotic contexts, where hallucinations and delusional beliefs can generate high levels of anxiety, compulsions may emerge or intensify as an attempt to alleviate that distress.

Results also pointed out a moderate association between OCD and negative and depressive symptoms. These results are consistent with previous research showing that more severe OCD symptoms are associated with a greater negative impact on individuals, particularly through their link with negative psychotic symptoms (Frías-Ibáñez et al., 2014; Ohta et al., 2003; Singh et al., 2019). In fact, several studies have reported that individuals with OCD tend to exhibit more negative than positive symptoms (Ohta et al., 2003; Schirmbeck et al., 2018). As aforementioned, it is important to emphasize that such negative and depressive presentations (particularly when assessed with dimensional self-report measures) may often reflect secondary manifestations (e.g., consequences of comorbid depressive disorders, prolonged functional

impairment, or medication effects) rather than primary negative symptoms of schizophrenia; this distinction is crucial because it has direct implications for clinical interpretation and intervention (Kirkpatrick, 2014; Strauss et al., 1974).

Obsessions and compulsions have a detrimental impact on an individual's mental health, resulting in a range of psychological symptoms. Among these, major depressive disorder is the most common comorbid disorder (Rowe et al., 2022; Sharma et al., 2021). It is important to differentiate symptoms associated with the negative dimension of psychosis from those typical of mood disorders, as they may overlap and create diagnostic challenges. For instance, symptoms of sadness, hopelessness, suicidal ideation, and pessimism are characteristic of depression; alogia (poverty of speech), apathy, and blunted affect are more specific to psychotic disorders. Meanwhile, symptoms like anhedonia, anergia, and avolition can be common to both conditions (Krynicki et al., 2018).

Lastly, psychotic symptoms showed a moderate correlation with the health subscales, while there were hardly any significant correlations of obsessions and compulsions with health. This may indicate that the impact of OCD symptoms on individuals' lives may be less in the absence of psychotic comorbidity. In contrast to previous studies indicating that obsessions alone are related to poor quality of life (Masellis et al., 2003), our results show a stronger relationship between compulsions and physical and emotional health.

The results of the structural equation modeling indicated that psychotic symptoms fully mediated the relationship between compulsions and health, indicating that psychotic symptoms may account for the association observed between compulsions and poorer health outcomes. This suggests that psychotic symptoms may represent a key mechanism linking compulsions with health-related problems in individuals with OCD, highlighting the relevance of considering both symptom domains to better understand their association with health in individuals with OCD.

This finding could be a consequence of the greater interference compulsions have on people's lives compared to obsessions. In fact, individuals with OCD who experience compulsions are less likely to seek help compared to those with predominantly obsessive symptoms (Fullana et al., 2009), possibly delaying intervention. This lack of help-seeking behavior can worsen the individual's overall health, as untreated OCD, especially when combined with psychotic symptoms, may lead to more severe mental health deterioration.

Another feasible explanation for the mediating role of psychotic symptoms could be the lack of insight. Typically, OCD is characterized by ego-dystonic symptoms (Attademo et al., 2012), where individuals recognize their obsessions and compulsions as distressing and misaligned with their beliefs. However, when psychotic symptoms are present, these experiences may become more ego-syntonic, aligning with the individual's distorted reality due to impaired insight. This shift in perception can amplify the distress caused by OCD, making it more challenging for the individual to recognize the need for treatment, which could worsen their overall health (Matsunaga et al., 2002; Tezenas du Montcel et al., 2019).

The high comorbidity between the two nosological entities presents significant unresolved therapeutic implications. In pharmacological terms, scientific literature presents certain challenges, as the first-line pharmacological treatments for each diagnosis differ. Furthermore, the use of second-generation antipsychotics may trigger or exacerbate OCD symptomatology (Fonseka et al., 2014), whereas selective serotonin reuptake inhibitors (SSRIs) may worsen psychotic symptoms (Pardossi et al., 2024; Sharma and Reddy, 2019). In regard to psychological treatments, preliminary results from studies indicate that cognitive-behavioral therapy (CBT) is an effective course of action for both OCD and psychosis (Tundo and Necci, 2016). Similarly, evidence suggests that CBT with exposure and response prevention (EPR) is an effective treatment for OCD, even in individuals with OCD and psychotic symptoms (Solem et al., 2015; Tundo and Necci, 2016). A symptom-based approach addressing the specific manifestations of OCD and psychosis would be more beneficial than a disorder-based approach. This transdiagnostic model could lead to more personalized and effective treatments, considering the overlap and interaction between the two disorders (Bebbington and Freeman, 2017; Gillan et al., 2017; Solmi et al., 2023).

These results should be interpreted in light of several limitations. Firstly, the relatively small sample size should be mentioned. However, note that the results of this study have significant scientific and clinical implications for patients receiving treatment for OCD. Another limitation concerns the potential conceptual overlap between negative and depressive symptoms as measured by the CAPE-42. While the two dimensions are composed of distinct items, some negative symptoms (e.g., lack of motivation, anhedonia) may also be present in mood disorders, which could affect the specificity of the associations observed. Furthermore, this is a cross-sectional study, which precludes the examination of causal relationships between variables. Another limitation is that the study partially relied on self-report questionnaires instead of formal diagnostic tools, which could lead to misclassification of symptoms. The study consisted of participants who are receiving outpatient treatment for OCD, which could introduce a selection bias. It is possible that these individuals possess specific characteristics (e.g., level of insight, severity of symptoms) that differentiate them from those with OCD who are not undergoing treatment. Finally, other critical dependent variables, such as functioning or cognitive variables, were not included in this study. This omission is notable, as several studies have shown that the presence of psychotic symptoms worsened these variables (see e.g., Dijkstra et al., 2021; Okamura et al., 2022; L. Sharma and Reddy, 2019).

4.1. Conclusion

This study reinforces the complex interplay between OCD and psychosis, highlighting the association between psychotic symptoms and greater health impact in individuals with OCD. The identification and treatment of these symptoms can lead to a substantial improvement in health, as well as in the prognosis and quality of life of individuals with OCD. Furthermore, understanding psychotic symptoms within a dimensional, transdiagnostic framework underscores the importance of detecting early or subthreshold manifestations and addressing premorbid cognitive and functional deficits, which can guide early intervention and reduce stigma. By gaining a deeper understanding of how psychotic symptoms affect OCD, we can develop more targeted and effective therapeutic approaches. Clinicians should consider both the obsessive and compulsive symptomatology of OCD alongside psychotic symptoms when developing treatment protocols. A symptom-based transdiagnostic approach could be a feasible option in addressing the needs of patients with comorbid OCD and psychosis. Such an approach opens new possibilities for tailored, integrated therapeutic interventions.

CRediT authorship contribution statement

Gema Aonso-Diego: Writing – original draft, Methodology, Formal analysis, Conceptualization. **Pamela Parada-Fernández:** Writing – review & editing, Supervision, Resources, Project administration, Data curation. **Laura Mendo:** Writing – review & editing, Formal analysis, Conceptualization. **Laura Macía:** Writing – original draft, Investigation, Conceptualization. **Ana Estévez:** Writing – original draft, Validation, Supervision. **Claudio Maruottolo:** Writing – review & editing, Supervision, Resources, Project administration, Data curation.

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Declaration of competing interest

I have nothing to declare.

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